



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/743,641

12/22/2003

Chen-Chung S. Chang

048502.017CIP1

7411

25461 7590 04/15/2008

SMITH, GAMBRELL & RUSSELL
SUITE 3100, PROMENADE II
1230 PEACHTREE STREET, N.E.
ATLANTA, GA 30309-3592

EXAMINER

LAVILLA, MICHAEL E

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

04/15/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/743,641	Applicant(s) CHANG ET AL.	
	Examiner Michael La Villa	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-55 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-46, 49, 50, and 53-55 is/are rejected.
- 7) ☒ Claim(s) 47, 48, 51 and 52 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:
 2. The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 1-36, 38, 41-44, 46, 50, 54, and 55 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Regarding Claims 1, 11, 13, 14, 16, 18, 24-26, 28-30, 34, 36, 41, 43, 44, 46, 54, and 55, it is unclear what is meant by the phrase “without any intermediate heat treating.” This negative product-by-process limitation does not define between what beginning point and what endpoint is heat treatment precluded. Hence, it is unclear how to ascertain whether a precluded heat treatment has been performed.
5. Regarding Claims 19, 24-26, and 28, it is unclear what is meant by the phrase “a titanium layer including titanium”. It is unclear whether the phrase portion "including titanium" is superfluous since a “titanium layer” would necessarily include titanium. It is unclear whether this phrase portion means “containing titanium as a main component,” or not necessarily. It is unclear whether the term “titanium” in the phrase portion "titanium layer" merely identifies the layer as opposed to defining its content.

Art Unit: 1794

6. Regarding Claims 2-9, 11-18, 20, 21, 31, 34-36, 38, and 50, it is unclear what is meant by the phrase “commercially pure” for the reasons of record in the Office Action mailed on 27 June 2007.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

8. A person shall be entitled to a patent unless –

9. (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1, 4, 5, 11-13, 16, and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Hirano et al. USP 5,028,495 for the reasons of record in the Office Action mailed on 27 June 2007.

11. Claims 1, 4, 5, 11-13, 16, and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Jha et al. USP 5,553,770 for the reasons of record in the Office Action mailed on 27 June 2007.

12. Claims 1-3, 7, 8, 10-13, 16, 19, 20, 22, 25, 26, 29, and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Mennucci USP 5,761,799 for the reasons of record in the Office Action mailed on 27 June 2007.

13. Claims 1, 4, 5, 10, 11-16, and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Galasso et al. USPN 4,034,454 for the reasons of record in the Office Action mailed on 27 June 2007.

14. Claims 1-30, 34-46, 49, 50, and 53-55 are rejected under 35 U.S.C. 102(b) as being anticipated by Hirano et al. JP 4-006173 for the reasons of record in the Office Action mailed on 27 June 2007.

Art Unit: 1794

Claim Rejections - 35 USC § 102/103

15. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

16. A person shall be entitled to a patent unless –

17. (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

19. A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

21. Determining the scope and contents of the prior art.
22. Ascertaining the differences between the prior art and the claims at issue.
23. Resolving the level of ordinary skill in the pertinent art.
24. Considering objective evidence present in the application indicating obviousness or nonobviousness.

25. Claims 1, 4, 5, 11-13, 16, and 34 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hirano et al. USP 5,028,495 for the reasons of record in the Office Action mailed on 27 June 2007.

26. Claims 1, 4, 5, 11-13, 16, and 34 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Jha et al. USP 5,553,770 for the reasons of record in the Office Action mailed on 27 June 2007.

Art Unit: 1794

27. Claims 1, 4, 5, 11-13, 16, and 34 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Galasso et al. USPN 4,034,454 for the reasons of record in the Office Action mailed on 27 June 2007.

28. Claims 1-30, 34-46, 49, 50, and 53-55 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hirano et al. JP 4-006173 for the reasons of record in the Office Action mailed on 27 June 2007.

Response to Amendment

29. In view of applicant's amendments and arguments, applicant traverses the section 112, second paragraph rejection of the Office Action mailed on 27 June 2007. The rejection with respect to Claim 42 is overcome and therefore withdrawn. With respect to the rejection of the "commercially pure" designation, applicant argues that the claims are to encompass whatever material is as pure as is commercially available at the time. It is unclear how one of ordinary skill in the art can identify whether a composition is "commercially pure." Is the controlling issue whether the material were purchased from a manufacturer and designated as "pure"? If not designated as "pure", is the claimed material being used? If the material were not purchased and slightly different from that in the market place, would the material necessarily not be "commercially pure"? If the material were purchased and designated by the manufacturer as pure at the time, but the standards of purity changed, even to being less pure, would the material still be "commercially pure" when used after standards changed? Since applicant has defined the material by its sourcing and designation, as opposed to by its content, the claimed

Art Unit: 1794

designation is indefinite. Applicant anticipates that the compositional elements and relative amounts of such commercially pure compositions may evolve over time, and applicant seeks to define the claimed materials in terms of whatever composition is commercially pure at any instant in time. Again, applicant is invited to present legal authority for this type of time evolution claiming. In the context of claims having claim limitations that are to be defined by trademarked materials, such trademarked materials are objectionable as claim limitations when they do not have a fixed meaning and may change over time. See MPEP 608.01(v). By using the “commercially pure” designation, applicant’s purpose of capturing a material that may change over time appears to be analogous, and hence it is indefinite. Applicant points out that the terminology “commercially pure” is present in claims of issued United States patents. This fact does not address the reasons why applicant’s argued for meaning is indefinite. Rejection of the indefiniteness of “commercially pure” terminology is maintained.

30. In view of applicant’s amendments and arguments, applicant traverses the section 102 rejection over Hirano ‘495, the section 102/103 rejection over Hirano ‘495, the section 102 rejection over Jha, the section 102/103 rejection over Jha, the section 102 rejection over Galasso, and the section 102/103 rejection over Galasso of the Office Action mailed on 27 June 2007. Applicant argues that these references do not teach the claimed product-by-process limitation, namely, an absence of intermediate heat treatment. The clad material that has not yet been annealed has been formed without heat treatment. This material may be deemed a brazing strip, albeit thicker than typically utilized. Furthermore, the subsequently performed heat treatments of the prior art may not be considered

Art Unit: 1794

“intermediate heat treatment” in which case the resulting brazing strip has been formed without intermediate heat treatment. Finally, even were the precluded heat treatment step to be exactly identified with the annealing steps utilized in the prior art, the claim is directed to an article, and applicant has not demonstrated that the claimed article, as defined by the claimed negative product-by-process limitation, is necessarily other than those of the prior art. Applicant has not shown that preclusion of any intermediate heat treatment, as opposed to those specifically characterized in the Specification, achieve the argued for benefits. Applicant's identified benefits that may manifest themselves compositionally or structurally upon an absence of intermediate heat treatment are not explicitly claimed. Moreover, it is unclear that the prior art strips suffer from brittleness, unwanted interdiffusion, unwanted intermetallics, or undesirable brittleness or cracking that precludes further rolling to desired thickness since the cited prior art does achieve braze strips and foils of thicknesses comparable to those of applicant without any description of these problems. Applicant has not specifically addressed the possibility that the claims encompass forming the laminates by hot roll bonding, that would not entail intermediate heat treatment and that would result in articles indistinguishable from those formed by the method of the prior art. Applicant also argues that to the extent that the references do teach the claimed product-by-process limitation, the product is not a finished braze strip or foil. That the prior art methods require further steps to form what the prior art method considers a finished braze strip or foil does not preclude identifying the formed laminate at such an intermediate stage as a

Art Unit: 1794

brazing strip or foil. Applicant has not established that the strip or foil could not function as a brazing strip or foil. Applicant's Specification deems suitable brazing strips as having thicknesses in excess of 5 mils. See Specification (paragraph 46). Rejection is maintained.

31. In view of applicant's amendments and arguments, applicant traverses the section 102 rejection over Mennucci '749 and the section 102/103 rejection over Mennucci '749 of the Office Action mailed on 27 June 2007. Applicant argues that Mennucci does not teach a brazing strip, but rather anodes having platinum strips. While this characterization appears to be correct, it would be expected that the laminates of Mennucci could serve as brazing strip or foil. It is unclear why applicant considers that Mennucci's material cannot serve as a brazing strip in the absence of pre-alloying of platinum. Furthermore, Mennucci '749 teaches that alloys of platinum are effective for the anode of Mennucci '749. See Mennucci '749 (col. 2, lines 19-23). Rejection is maintained.

32. In view of applicant's amendments and arguments, applicant traverses the section 102 rejection over Hirano '173 and the section 102/103 rejection over Hirano '173 of the Office Action mailed on 27 June 2007. Applicant argues that no metallic bond is present between layers. In the antepenultimate paragraphs on pages 6 and 7 of the translation, the composite is described as being formed by lamination (page 6) and rolling (page 7) followed by annealing. The articles, prior to and after annealing, would be expected to contain metallic interfacial bonding. The articles can be identified with a brazing strip or foil, even if of greater thickness than most preferable. Subsequently, Hirano teaches rolling

Art Unit: 1794

and annealing. Applicant has not demonstrated that articles made in this manner are necessarily structurally and compositionally precluded by the negative product-by-process limitation pertaining to no intermediate heat treatment for the reasons already discussed above with respect to prior art rejections over Hirano '495, Jha, and Galasso. Furthermore, while there may be subsequent annealing in Hirano '173, the claimed product-by-process limitation may include hot rolling, which may result in products identical to or substantially identical to those of Hirano '173. Applicant argues that the claimed invention requires one core, whereas Hirano teaches two cores. It is unclear how the claimed layer structure precludes Hirano's so-called two cores, even if two cores are not required. Rejection is maintained.

Allowable Subject Matter

33. Claims 47, 48, 51, and 52 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

34. Claims 31-33 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

35. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael La Villa whose telephone number is (571) 272-1539. The examiner can normally be reached on Monday through Friday.

Art Unit: 1794

36. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye, can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

37. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael La Villa/
Michael La Villa
Primary Examiner, Art Unit 1794
12 April 2008